Amadeu K. Sum

List of Publications by Year
in descending order

265	14,124	19655 61	24978 109
papers	citations	h-index	g-index

274	274	274	6223
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Microsecond Simulations of Spontaneous Methane Hydrate Nucleation and Growth. Science, 2009, 326, 1095-1098.	12.6	644
2	Measurement of Clathrate Hydrates via Raman Spectroscopy. Journal of Physical Chemistry B, 1997, 101, 7371-7377.	2.6	534
3	A review of solidified natural gas (SNG) technology for gas storage via clathrate hydrates. Applied Energy, 2018, 216, 262-285.	10.1	420
4	Effective kinetic inhibitors for natural gas hydrates. Chemical Engineering Science, 1996, 51, 1221-1229.	3.8	368
5	Fundamentals and Applications of Gas Hydrates. Annual Review of Chemical and Biomolecular Engineering, 2011, 2, 237-257.	6.8	367
6	Clathrate Hydrates: From Laboratory Science to Engineering Practice. Industrial & Engineering Chemistry Research, 2009, 48, 7457-7465.	3.7	347
7	A new apparatus for seawater desalination by gas hydrate process and removal characteristics of dissolved minerals (Na+, Mg2+, Ca2+, K+, B3+). Desalination, 2011, 274, 91-96.	8.2	320
8	Seawater desalination by gas hydrate process and removal characteristics of dissolved ions (Na+, K+,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	8.2	299
9	A Review of Clathrate Hydrate Based Desalination To Strengthen Energyâ€“Water Nexus. ACS Sustainable Chemistry and Engineering, 2018, 6, 8093-8107.	6.7	275
10	Challenges, Uncertainties, and Issues Facing Gas Production From Gas-Hydrate Deposits. SPE Reservoir Evaluation and Engineering, 2011, 14, 76-112.	1.8	257
11	A new apparatus to enhance the rate of gas hydrate formation: Application to capture of carbon dioxide. International Journal of Greenhouse Gas Control, 2010, 4, 630-637.	4.6	255
12	Gas hydrates: A cleaner source of energy and opportunity for innovative technologies. Korean Journal of Chemical Engineering, 2005, 22, 671-681.	2.7	205
13	Interfacial mechanisms governing cyclopentane clathrate hydrate adhesion/cohesion. Physical Chemistry Chemical Physics, 2011, 13, 19796.	2.8	203
14	Molecular Simulation Study of Phospholipid Bilayers and Insights of the Interactions with Disaccharides. Biophysical Journal, 2003, 85, 2830-2844.	0.5	200
15	Water proton configurations in structures I, II, and H clathrate hydrate unit cells. Journal of Chemical Physics, 2013, 138, 124504.	3.0	193
16	Methane Hydrate Nucleation Rates from Molecular Dynamics Simulations: Effects of Aqueous Methane Concentration, Interfacial Curvature, and System Size. Journal of Physical Chemistry C, 2011, 115, 21241-21248.	3.1	187
17	State of the art: Natural gas hydrates as a natural resource. Journal of Natural Gas Science and Engineering, 2012, 8, 132-138.	4.4	180
18	Droplet Size Scaling of Water-in-Oil Emulsions under Turbulent Flow. Langmuir, 2012, 28, 104-110.	3.5	176

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19	Experimental flowloop investigations of gas hydrate formation in high water cut systems. Chemical Engineering Science, 2013, 97, 198-209.	3.8	172
20	Surface Chemistry and Gas Hydrates in Flow Assurance. Industrial & Engineering Chemistry Research, 2011, 50, 188-197.	3.7	164
21	Properties of the clathrates of hydrogen and developments in their applicability for hydrogen storage. Chemical Physics Letters, 2009, 478, 97-109.	2.6	162
22	Increasing Hydrogen Storage Capacity Using Tetrahydrofuran. Journal of the American Chemical Society, 2009, 131, 14616-14617.	13.7	158
23	Molecular Dynamics Study on the Biophysical Interactions of Seven Green Tea Catechins with Lipid Bilayers of Cell Membranes. Journal of Agricultural and Food Chemistry, 2008, 56, 7750-7758.	5.2	157
24	Inhibition of methane and natural gas hydrate formation by altering the structure of water with amino acids. Scientific Reports, 2016, 6, 31582.	3.3	153
25	Molecular studies of the gel to liquid-crystalline phase transition for fully hydrated DPPC and DPPE bilayers. Biochimica Et Biophysica Acta - Biomembranes, 2007, 1768, 354-365.	2.6	148
26	Molecular Simulation Study of Structural and Dynamic Properties of Mixed DPPC/DPPE Bilayers. Biophysical Journal, 2006, 90, 3951-3965.	0.5	147
27	Molecular Binding of Catechins to Biomembranes: Relationship to Biological Activity. Journal of Agricultural and Food Chemistry, 2009, 57, 6720-6728.	5.2	138
28	Adhesion force between cyclopentane hydrates and solid surface materials. Journal of Colloid and Interface Science, 2010, 343, 529-536.	9.4	137
29	In Situ Studies of the Mass Transfer Mechanism across a Methane Hydrate Film Using High-Resolution Confocal Raman Spectroscopy. Journal of Physical Chemistry C, 2010, 114, 1173-1180.	3.1	137
30	The cages, dynamics, and structuring of incipient methane clathrate hydrates. Physical Chemistry Chemical Physics, 2011, 13, 19951.	2.8	127
31	Gas hydrates: Unlocking the energy from icy cages. Journal of Applied Physics, 2009, 106, .	2.5	124
32	Calculation of Liquid Waterâ^'Hydrateâ^'Methane Vapor Phase Equilibria from Molecular Simulations. Journal of Physical Chemistry B, 2010, 114, 5775-5782.	2.6	118
33	Measurement and Calibration of Droplet Size Distributions in Water-in-Oil Emulsions by Particle Video Microscope and a Focused Beam Reflectance Method. Industrial & Engineering Chemistry Research, 2010, 49, 1412-1418.	3.7	116
34	Molecular Characterization of Gel and Liquid-Crystalline Structures of Fully Hydrated POPC and POPE Bilayers. Journal of Physical Chemistry B, 2007, 111, 6026-6033.	2.6	114
35	Ab Initio Calculations of Cooperativity Effects on Clusters of Methanol, Ethanol, 1-Propanol, and Methanethiol. Journal of Physical Chemistry A, 2000, 104, 1121-1129.	2.5	112
36	Measurements of methane hydrate equilibrium in systems inhibited with NaCl and methanol. Journal of Chemical Thermodynamics, 2012, 48, 1-6.	2.0	109

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37	Developing a Comprehensive Understanding and Model of Hydrate in Multiphase Flow: From Laboratory Measurements to Field Applications. Energy & Fuels, 2012, 26, 4046-4052.	5.1	101
38	Overview of CSMHyK: A transient hydrate formation model. Journal of Petroleum Science and Engineering, 2012, 98-99, 122-129.	4.2	99
39	High-Pressure Rheology of Hydrate Slurries Formed from Water-in-Oil Emulsions. Energy & Fuels, 2012, 26, 3504-3509.	5.1	97
40	Methane hydrate phase equilibria for systems containing NaCl, KCl, and NH 4 Cl. Fluid Phase Equilibria, 2016, 413, 2-9.	2.5	95
41	Micromechanical Adhesion Force Measurements between Hydrate Particles in Hydrocarbon Oils and Their Modifications. Energy & Fuels, 2009, 23, 5966-5971.	5.1	94
42	Gas Hydrate Deposition on a Cold Surface in Water-Saturated Gas Systems. Industrial & Engineering Chemistry Research, 2013, 52, 6262-6269.	3.7	94
43	Surfactant Adsorption and Interfacial Tension Investigations on Cyclopentane Hydrate. Langmuir, 2013, 29, 2676-2682.	3.5	92
44	Micromechanical cohesion force measurements to determine cyclopentane hydrate interfacial properties. Journal of Colloid and Interface Science, 2012, 376, 283-288.	9.4	91
45	Methaneâ€“ethane and methaneâ€“propane hydrate formation and decomposition on water droplets. Chemical Engineering Science, 2005, 60, 4203-4212.	3.8	88
46	The role of fatty acid unsaturation in minimizing biophysical changes on the structure and local effects of bilayer membranes. Biochimica Et Biophysica Acta - Biomembranes, 2009, 1788, 1508-1516.	2.6	88
47	Quantitative measurement and mechanisms for CH₄ production from hydrates with the injection of liquid CO₂. Physical Chemistry Chemical Physics, 2014, 16, 14922-14927.	2.8	88
48	Molecular Simulation Study on the Influence of Dimethylsulfoxide on the Structure of Phospholipid Bilayers. Biophysical Journal, 2003, 85, 3636-3645.	0.5	87
49	Influence of Model Oil with Surfactants and Amphiphilic Polymers on Cyclopentane Hydrate Adhesion Forces. Energy & Fuels, 2010, 24, 5441-5445.	5.1	87
50	Reaction Coordinate of Incipient Methane Clathrate Hydrate Nucleation. Journal of Physical Chemistry B, 2014, 118, 13236-13243.	2.6	83
51	Insights into the formation mechanism of hydrate plugging in pipelines. Chemical Engineering Science, 2015, 122, 284-290.	3.8	81
52	How Properties of Solid Surfaces Modulate the Nucleation of Gas Hydrate. Scientific Reports, 2015, 5, 12747.	3.3	79
53	Synergistic Hydrate Inhibition of Monoethylene Glycol with Poly(vinylcaprolactam) in Thermodynamically Underinhibited System. Journal of Physical Chemistry B, 2014, 118, 9065-9075.	2.6	78
54	Tetra-n-butylammonium Borohydride Semiclathrate: A Hybrid Material for Hydrogen Storage. Journal of Physical Chemistry A, 2009, 113, 6415-6418.	2.5	70

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55	Predicting hydrate plug formation in oil-dominated flowlines. Journal of Petroleum Science and Engineering, 2010, 72, 302-309.	4.2	68
56	Large-Cage Occupancies of Hydrogen in Binary Clathrate Hydrates Dependent on Pressures and Guest Concentrations. Journal of Physical Chemistry C, 2010, 114, 15218-15222.	3.1	68
57	Thermodynamic and kinetic analysis of gas hydrates for desalination of saturated salinity water. Chemical Engineering Journal, 2019, 370, 980-987.	12.7	68
58	Model Water-in-Oil Emulsions for Gas Hydrate Studies in Oil Continuous Systems. Energy & Fuels, 2013, 27, 4564-4573.	5.1	65
59	New Observations and Insights into the Morphology and Growth Kinetics of Hydrate Films. Scientific Reports, 2014, 4, 4129.	3.3	65
60	Modulating Membrane Properties:Â The Effect of Trehalose and Cholesterol on a Phospholipid Bilayer. Journal of Physical Chemistry B, 2005, 109, 24173-24181.	2.6	63
61	Advances in molecular simulations of clathrate hydrates. Current Opinion in Chemical Engineering, 2013, 2, 184-190.	7.8	63
62	Thermodynamic and Spectroscopic Identification of Guest Gas Enclathration in the Double Tetra-n-butylammonium Fluoride Semiclathrates. Journal of Physical Chemistry B, 2012, 116, 9075-9081.	2.6	62
63	Predictive Molecular Model for the Thermodynamic and Transport Properties of Triacylglycerols. Journal of Physical Chemistry B, 2003, 107, 14443-14451.	2.6	61
64	Phase Equilibria and Thermodynamic Modeling of Ethane and Propane Hydrates in Porous Silica Gels. Journal of Physical Chemistry B, 2009, 113, 5487-5492.	2.6	61
65	Molecular dynamics simulations of vapor/liquid coexistence using the nonpolarizable water models. Journal of Chemical Physics, 2011, 134, 124708.	3.0	60
66	Hydrogen Storage in Double Clathrates with tert-Butylamine. Journal of Physical Chemistry A, 2009, 113, 6540-6543.	2.5	59
67	Multiphase flow modeling of gas hydrates with a simple hydrodynamic slug flow model. Chemical Engineering Science, 2013, 99, 298-304.	3.8	59
68	Nucleation rate analysis of methane hydrate from molecular dynamics simulations. Faraday Discussions, 2015, 179, 463-474.	3.2	57
69	Thermodynamic properties of methane/water interface predicted by molecular dynamics simulations. Journal of Chemical Physics, 2011, 134, 144702.	3.0	55
70	Two-component order parameter for quantifying clathrate hydrate nucleation and growth. Journal of Chemical Physics, 2014, 140, 164506.	3.0	55
71	Thermodynamic and kinetic influences of NaCl on HFC-125a hydrates and their significance in gas hydrate-based desalination. Chemical Engineering Journal, 2019, 358, 598-605.	12.7	55
72	Biophysical changes induced by xenon on phospholipid bilayers. Biochimica Et Biophysica Acta - Biomembranes, 2013, 1828, 1347-1356.	2.6	54

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73	Adhesion Force between Cyclopentane Hydrate and Mineral Surfaces. Langmuir, 2013, 29, 15551-15557.	3.5	53
74	Gas Hydrates Phase Equilibria and Formation from High Concentration NaCl Brines up to 200 MPa. Journal of Chemical & Engineering Data, 2017, 62, 1910-1918.	1.9	52
75	Methane Hydrate Formation and Dissociation on Suspended Gas Bubbles in Water. Journal of Chemical & Engineering Data, 2014, 59, 1045-1051.	1.9	51
76	Universal correlation for gas hydrates suppression temperature of inhibited systems: I. Single salts. AICHE Journal, 2017, 63, 5111-5124.	3.6	51
77	Lowering of Clathrate Hydrate Cohesive Forces by Surface Active Carboxylic Acids. Energy & Fuels, 2012, 26, 5102-5108.	5.1	50
78	Orifice jamming of fluid-driven granular flow. Physical Review E, 2013, 87, 042204.	2.1	50
79	Kinetic Studies on Methane Hydrate Formation in the Presence of Kinetic Inhibitor via in Situ Raman Spectroscopy. Energy & Fuels, 2012, 26, 7045-7050.	5.1	49
80	Phase Equilibrium Data and Model Comparisons for H₂S Hydrates. Journal of Chemical & Engineering Data, 2015, 60, 403-408.	1.9	49
81	Dynamics of hydrate formation and deposition under pseudo multiphase flow. AICHE Journal, 2017, 63, 4136-4146.	3.6	48
82	A correlation to quantify hydrate plugging risk in oil and gas production pipelines based on hydrate transportability parameters. Journal of Natural Gas Science and Engineering, 2018, 58, 152-161.	4.4	47
83	Jamming of particles in a two-dimensional fluid-driven flow. Physical Review E, 2012, 86, 061311.	2.1	46
84	Investigating the Thermodynamic Stabilities of Hydrogen and Methane Binary Gas Hydrates. Journal of Physical Chemistry C, 2014, 118, 3783-3788.	3.1	45
85	Adhesion force interactions between cyclopentane hydrate and physically and chemically modified surfaces. Physical Chemistry Chemical Physics, 2014, 16, 25121-25128.	2.8	45
86	Molecular vibrations of methane molecules in the structure I clathrate hydrate from ab initio molecular dynamics simulation. Journal of Chemical Physics, 2012, 136, 044508.	3.0	43
87	Promoting gas hydrate formation with ice-nucleating additives for hydrate-based applications. Applied Energy, 2019, 251, 113352.	10.1	43
88	Synthesis and Characterization of sI Clathrate Hydrates Containing Hydrogen. Journal of Physical Chemistry C, 2012, 116, 18557-18563.	3.1	42
89	Influences of large molecular alcohols on gas hydrates and their potential role in gas storage and CO2 sequestration. Chemical Engineering Journal, 2015, 267, 117-123.	12.7	42
90	Synthesis and characterization of clathrate hydrates containing carbon dioxide and ethanol. Physical Chemistry Chemical Physics, 2010, 12, 9927.	2.8	41

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91	Viscosity and yield stresses of ice slurries formed in water-in-oil emulsions. Journal of Non-Newtonian Fluid Mechanics, 2011, 166, 859-866.	2.4	41
92	A Novel Approach to Phase Equilibria Predictions UsingAb InitioMethods. Industrial & Engineering Chemistry Research, 1999, 38, 2849-2855.	3.7	40
93	Assessing thermodynamic consistency of gas hydrates phase equilibrium data for inhibited systems. Fluid Phase Equilibria, 2018, 473, 294-299.	2.5	40
94	Structural effects of small molecules on phospholipid bilayers investigated by molecular simulations. Fluid Phase Equilibria, 2004, 225, 63-68.	2.5	39
95	Correlation of Hydrate-Film Growth Rate at the Guest/Liquid-Water Interface to Mass Transfer Resistance. Industrial & Engineering Chemistry Research, 2010, 49, 7102-7103.	3.7	39
96	Universal correlation for gas hydrates suppression temperature of inhibited systems: III. salts and organic inhibitors. AICHE Journal, 2018, 64, 4097-4109.	3.6	39
97	Simulation of Vaporâ"Liquid Phase Equilibria of Primary Alcohols and Alcoholâ"Alkane Mixtures. Journal of Physical Chemistry B, 2004, 108, 10071-10076.	2.6	37
98	Cage occupancy of methane hydrates from Gibbs ensemble Monte Carlo simulations. Fluid Phase Equilibria, 2016, 413, 242-248.	2.5	36
99	Insights into the Kinetics of Methane Hydrate Formation in a Stirred Tank Reactor by Inâ€...Situ Raman Spectroscopy. Energy Technology, 2015, 3, 925-934.	3.8	35
100	Molecular Dynamics Study on the Stabilization of Dehydrated Lipid Bilayers with Glucose and Trehalose. Journal of Physical Chemistry B, 2008, 112, 10732-10740.	2.6	34
101	Intrinsic Structural Features of the Human IRE1Î± Transmembrane Domain Sense Membrane Lipid Saturation. Cell Reports, 2019, 27, 307-320.e5.	6.4	34
102	Perspectives on Gas Hydrates Cold Flow Technology. Energy & Fuels, 2019, 33, 1-15.	5.1	34
103	Correlation of methane Raman Î½₁ band position with fluid density and interactions at the molecular level. Journal of Raman Spectroscopy, 2007, 38, 1510-1515.	2.5	33
104	Gas hydrates phase equilibria for structure I and II hydrates with chloride salts at high salt concentrations and up to 200 MPa. Journal of Chemical Thermodynamics, 2018, 117, 27-32.	2.0	33
105	A Multiscale Approach for Gas Hydrates Considering Structure, Agglomeration, and Transportability under Multiphase Flow Conditions: I. Phenomenological Model. Industrial & Engineering Chemistry Research, 2019, 58, 14446-14461.	3.7	33
106	Monte Carlo molecular simulation of the hydration of Naâ€"montmorillonite at reservoir conditions. Journal of Chemical Physics, 2004, 120, 939-946.	3.0	32
107	Experimental and Computational Studies Investigating Trehalose Protection of HepG2 Cells from Palmitate-Induced Toxicity. Biophysical Journal, 2008, 94, 2869-2883.	0.5	32
108	Vibrational modes of methane in the structure H clathrate hydrate from ab initio molecular dynamics simulation. Journal of Chemical Physics, 2012, 137, 144306.	3.0	32

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109	Experimental study of the formation and deposition of gas hydrates in non-emulsifying oil and condensate systems. Chemical Engineering Science, 2016, 155, 111-126.	3.8	32
110	Phase equilibrium data of methane hydrates in mixed brine solutions. Journal of Natural Gas Science and Engineering, 2017, 46, 750-755.	4.4	32
111	High pressure rheometer for in situ formation and characterization of methane hydrates. Review of Scientific Instruments, 2012, 83, 015106.	1.3	31
112	Predicting Hydrate Blockages in Oil, Gas and Water-Dominated Systems. , 2012, , .		31
113	Molecular investigation of the interactions of trehalose with lipid bilayers of DPPC, DPPE and their mixture. Molecular Simulation, 2006, 32, 219-230.	2.0	30
114	Equilibrium Data of Gas Hydrates containing Methane, Propane, and Hydrogen Sulfide. Journal of Chemical & Engineering Data, 2015, 60, 424-428.	1.9	30
115	Enclathration of tert-butyl alcohol in sII hydrates and its implications in gas storage and CO2 sequestration. Fuel, 2016, 164, 237-244.	6.4	30
116	Hydrate Management in Deadlegs: Effect of Header Temperature on Hydrate Deposition. Energy & Fuels, 2017, 31, 11802-11810.	5.1	30
117	Insight into increased stability of methane hydrates at high pressure from phase equilibrium data and molecular structure. Fluid Phase Equilibria, 2017, 450, 24-29.	2.5	30
118	Experimental measurements and modelling of carbon dioxide hydrate phase equilibrium with and without ethanol. Fluid Phase Equilibria, 2016, 413, 176-183.	2.5	29
119	Universal correlation for gas hydrates suppression temperature of inhibited systems: II. Mixed salts and structure type. AICHE Journal, 2018, 64, 2240-2250.	3.6	29
120	Rock-Flow Cell: An Innovative Benchtop Testing Tool for Flow Assurance Studies. Industrial & Engineering Chemistry Research, 2019, 58, 8544-8552.	3.7	29
121	Sixty Years of the van der Waals and Platteeuw Model for Clathrate Hydratesâ€"A Critical Review from Its Statistical Thermodynamic Basis to Its Extensions and Applications. Chemical Reviews, 2020, 120, 13349-13381.	47.7	29
122	Computer simulation of acetonitrile and methanol with ab initio-based pair potentials. Journal of Chemical Physics, 2000, 113, 5401.	3.0	27
123	Prediction of the phase behavior of acetonitrile and methanol with ab initio pair potentials. I. Pure components. Journal of Chemical Physics, 2002, 116, 7627-7636.	3.0	27
124	Gas Hydrate Stability and Sampling: The Future as Related to the Phase Diagram. Energies, 2010, 3, 1991-2000.	3.1	27
125	Hydrate Plug Dissociation via Nitrogen Purge: Experiments and Modeling. Energy & Fuels, 2011, 25, 2572-2578.	5.1	27
126	Measurements of hydrate film fracture under conditions simulating the rise of hydrated gas bubbles in deep water. Chemical Engineering Science, 2014, 116, 109-117.	3.8	27

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127	Micromechanical Cohesion Force between Gas Hydrate Particles Measured under High Pressure and Low Temperature Conditions. Langmuir, 2015, 31, 3884-3888.	3.5	27
128	In Situ Raman Study of the Formation and Dissociation Kinetics of Methane and Methane/Propane Hydrates. Energy & Fuels, 2020, 34, 6288-6297.	5.1	27
129	Use of ab initio methods to make phase equilibria predictions using activity coefficient models. Fluid Phase Equilibria, 1999, 158-160, 375-380.	2.5	26
130	Hydrate Risk Assessment and Restart-Procedure Optimization of an Offshore Well Using a Transient Hydrate Prediction Model. Oil and Gas Facilities, 2012, 1, 49-56.	0.4	26
131	Mechanism of Cohesive Forces of Cyclopentane Hydrates with and without Thermodynamic Inhibitors. Industrial & Engineering Chemistry Research, 2014, 53, 18189-18193.	3.7	26
132	Characterization of slug initiation for horizontal air-water two-phase flow. Experimental Thermal and Fluid Science, 2017, 87, 80-92.	2.7	25
133	Hydrate Management of Deadlegs in Oil and Gas Production Systems â€“ Background and Development of Experimental Systems. Energy & Fuels, 2017, 31, 11783-11792.	5.1	25
134	Prediction of the phase behavior of acetonitrile and methanol with ab initio pair potentials. II. The mixture. Journal of Chemical Physics, 2002, 116, 7637-7644.	3.0	24
135	A molecular dynamics study of guestâ€“host hydrogen bonding in alcohol clathrate hydrates. Physical Chemistry Chemical Physics, 2015, 17, 12639-12647.	2.8	24
136	Gas hydrate formation from high concentration KCl brines at ultra-high pressures. Journal of Industrial and Engineering Chemistry, 2017, 50, 142-146.	5.8	24
137	Ab initiopair potential and phase equilibria predictions for hydrogen chloride. Journal of Chemical Physics, 2003, 118, 4086-4093.	3.0	23
138	Surfactant effects on SF6 hydrate formation. Journal of Colloid and Interface Science, 2009, 331, 55-59.	9.4	23
139	Rheology of Tetrahydrofuran Hydrate Slurries. Energy & Fuels, 2017, 31, 14385-14392.	5.1	23
140	Growth Kinetics and Gas Diffusion in Formation of Gas Hydrates from Ice. Journal of Physical Chemistry C, 2020, 124, 12999-13007.	3.1	23
141	Voronoi Tessellation Analysis of Clathrate Hydrates. Journal of Physical Chemistry C, 2012, 116, 20040-20046.	3.1	22
142	Effect of Kinetic Hydrate Inhibitor Polyvinylcaprolactam on Cyclopentane Hydrate Cohesion Forces and Growth. Energy & Fuels, 2014, 28, 3632-3637.	5.1	22
143	Design Principles for Nanoparticles Enveloped by a Polymer-Tethered Lipid Membrane. ACS Nano, 2015, 9, 9942-9954.	14.6	22
144	Development of a Tool to Assess Hydrate-Plug-Formation Risk in Oil-Dominant Pipelines. SPE Journal, 2015, 20, 884-892.	3.1	21

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145	Molecular dynamics simulations of the formation of ethane clathrate hydrates. Fluid Phase Equilibria, 2016, 413, 229-234.	2.5	21
146	Hydrate Management in Deadlegs: Effect of Wall Temperature on Hydrate Deposition. Energy & Fuels, 2018, 32, 3254-3262.	5.1	21
147	Structural effects of small molecules on phospholipid bilayers investigated by molecular simulations. Fluid Phase Equilibria, 2005, 228-229, 135-140.	2.5	20
148	Where and How Are Hydrate Plugs Formed?. , 2011, , 13-36.		20
149	Modeling the effects of hydrate wall deposition on slug flow hydrodynamics and heat transfer. Applied Thermal Engineering, 2017, 114, 245-254.	6.0	20
150	Investigating the effectiveness of anti-agglomerants in gas hydrates and ice formation. Fuel, 2019, 255, 115841.	6.4	20
151	A bench-scale flow loop study on hydrate deposition under multiphase flow conditions. Fuel, 2020, 262, 116558.	6.4	20
152	Propane and Water: The Cooperativity of Unlikely Molecules to Form Clathrate Structures. Journal of Physical Chemistry B, 2020, 124, 4661-4671.	2.6	20
153	Molecular study of the diffusional process of DMSO in double lipid bilayers. Biochimica Et Biophysica Acta - Biomembranes, 2006, 1758, 1751-1758.	2.6	19
154	Development of a high pressure micromechanical force apparatus. Review of Scientific Instruments, 2014, 85, 095120.	1.3	19
155	Coexistence of sI and sII in methane-propane hydrate former systems at high pressures. Chemical Engineering Science, 2019, 208, 115149.	3.8	19
156	Cage occupancies, lattice constants, and guest chemical potentials for structure II hydrogen clathrate hydrate from Gibbs ensemble Monte Carlo simulations. Journal of Chemical Physics, 2019, 150, 134503.	3.0	19
157	Steady-State and Transient Studies of Gas Hydrates Formation in Non-emulsifying Oil Systems. Energy & Fuels, 2017, 31, 2548-2556.	5.1	18
158	Molecular simulations on the stability and dynamics of bulk nanobubbles in aqueous environments. Physical Chemistry Chemical Physics, 2021, 23, 27533-27542.	2.8	18
159	Molecular Dynamics Study of the Properties of Capsaicin in an 1-Octanol/Water System. Journal of Physical Chemistry B, 2006, 110, 2351-2357.	2.6	17
160	Energy science of clathrate hydrates: Simulation-based advances. MRS Bulletin, 2011, 36, 205-210.	3.5	17
161	Hydrate Management in Deadlegs: Hydrate Deposition Characterization in a 1-in. Vertical Pipe System. Energy & Fuels, 2017, 31, 13536-13544.	5.1	17
162	A three-phase solid-liquid-gas slug flow mechanistic model coupling hydrate dispersion formation with heat and mass transfer. Chemical Engineering Science, 2018, 178, 222-237.	3.8	17

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163	The use of quantum chemistry to predict phase behavior for environmental and process engineering. Fluid Phase Equilibria, 2002, 194-197, 61-75.	2.5	16
164	Thermodynamic Stability of Structure H Hydrates Based on the Molecular Properties of Large Guest Molecules. Energies, 2012, 5, 459-465.	3.1	16
165	Rapid hydrogen hydrate growth from non-stoichiometric tuning mixtures during liquid nitrogen quenching. Journal of Chemical Physics, 2012, 136, 234504.	3.0	16
166	Effect of Hydrogen-to-Methane Concentration Ratio on the Phase Equilibria of Quaternary Hydrate Systems. Journal of Chemical & Engineering Data, 2015, 60, 418-423.	1.9	16
167	Phase Behavior of Carbon Dioxide Hydrates: A Comparison of Inhibition Between Sodium Chloride and Ethanol. Journal of Chemical & Engineering Data, 2017, 62, 3445-3451.	1.9	16
168	Gas Hydrate Sloughing as Observed and Quantified from Multiphase Flow Conditions. Energy & Fuels, 2018, 32, 3399-3405.	5.1	16
169	Hydrate Management in Deadlegs: Detection of Hydrate Deposition Using Permittivity Probe. Energy & Fuels, 2018, 32, 1693-1702.	5.1	16
170	Multiphase flash calculations for gas hydrates systems. Fluid Phase Equilibria, 2018, 475, 45-63.	2.5	16
171	Analysis of three-phase equilibrium conditions for methane hydrate by isometric-isothermal molecular dynamics simulations. Journal of Chemical Physics, 2018, 148, 184501.	3.0	16
172	Simultaneous in-situ macro and microscopic observation of CH4 hydrate formation/decomposition and solubility behavior using Raman spectroscopy. Applied Energy, 2019, 255, 113834.	10.1	16
173	A Multiscale Approach for Gas Hydrates Considering Structure, Agglomeration, and Transportability under Multiphase Flow Conditions: II. Growth Kinetic Model. Industrial & Engineering Chemistry Research, 2020, 59, 2123-2144.	3.7	16
174	Characterization of the coupling between gas hydrate formation and multiphase flow conditions. Journal of Natural Gas Science and Engineering, 2020, 83, 103567.	4.4	16
175	Gas Hydrates Phase Equilibrium with CaBr₂ and CaBr₂ + MEG at Ultra-High Pressures. Journal of Natural Gas Engineering, 2017, 2, 42-49.	0.3	15
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